UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

THE RECEIVERSHIP ESTATE OF AUDIENCESCIENCE INC. and REVITALIZATION PARTNERS, L.L.C., *As General Receiver for The Receivership Estate of AudienceScience Inc.*, *Plaintiffs,* v. GOOGLE LLC and YOUTUBE, LLC, *Defendants.*	Case No. 6:21-cv-1209 Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs The Receivership Estate of AudienceScience Inc. ("AudienceScience") and

Revitalization Partners, L.L.C., as General Receiver for the Receivership Estate of

AudienceScience Inc. ("Revitalization Partners") (collectively "Plaintiffs"), by their attorneys,

demand a trial by jury on all issues so triable and for their Complaint against Google LLC

("Google") and YouTube, LLC ("YouTube") (collectively, "Defendants") allege the following:

NATURE OF THE ACTION

1.   This action arises under 35 U.S.C. § 271 for Defendants' infringement of

AudienceScience's United States Patent Nos. 7,747,676 (the "'676 patent"), 7,882,175 (the

"'175 patent"), and 8,082,298 (the "'298 patent") (collectively, the "Asserted Patents").

THE PARTIES

2.   Plaintiff AudienceScience is the estate of a corporation organized under the laws

of the State of Washington with a place of business at 2815 Eastlake Avenue E, Suite 300, Seattle,

WA 98102.

1

3.   Plaintiff Revitalization Partners is a Domestic Limited-Liability Company organized under the laws of the State of Washington with a place of business at 2815 Eastlake Avenue E, Suite 300, Seattle, WA 98102.

4.   Google is a limited liability company organized under the laws of the State of Delaware with its headquarters at 1600 Amphitheater Parkway, Mountain View, California 94043. Google maintains regular and established places of business in this District, including offices at 500 W 2nd St., Suite 2900, Austin, TX 78701 and 110 East Houston Street, # 300, San Antonio, TX 78205. Google can be served through its registered agent for service at Corporation Service Company, with an address of 2710 Gateway Oaks Drive, Suite 150N, Sacramento, California 95833.

5.   Google does business in this District and across the State of Texas. It has been registered to do business in Texas since at least November 17, 2006. It has over 1,700 full-time employees in Texas. They are located predominantly in this District.

6.   YouTube is a limited liability company organized under the laws of Delaware with its headquarters at 901 Cherry Avenue, San Bruno, California 94066. YouTube may be served with process through its registered agent, the Corporation Service Company, with an address of 2710 Gateway Oaks Drive, Suite 150N, Sacramento, California 95833. YouTube is wholly owned by Google.

JURISDICTION AND VENUE

7.   This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8.   Jurisdiction and venue for this action are proper in the Western District of Texas.

9.   This Court has personal jurisdiction over Defendants because Defendants have purposefully availed themselves of the rights and benefits of the laws of this State and this

Judicial District. Defendants reside in the Western District of Texas by maintaining regular and established places of business at 500 W 2nd St., Austin, TX 78701 and 110 East Houston Street, # 300, San Antonio, TX 78205.

10.   This Court also has personal jurisdiction over Defendants because they have done and are doing substantial business in this Judicial District, both generally and with respect to the allegations in this Complaint, including Defendants' one or more acts of infringement in this Judicial District.

11.   Venue is proper in this Judicial District under 28 U.S.C. §§ 1391(b) and (c) and § 1400(b). Defendants have committed acts of infringement through, for example, making, using, offering for sale and selling Defendants' products and/or services, including delivering advertisements and the YouTube website, in the Western District of Texas and have regular and established places of business in this District. Defendants' offices at 500 W 2nd St., Austin, TX 78701 and 110 East Houston Street, # 300, San Antonio, TX 78205 are physical places in the District, they are established locations where Defendants' business has been carried out for several years, and Defendants publicly advertises their presence in the District.

12.   In addition, Defendants cache content at a Google Global Cache ("GGC") servers located in this district. *Seven Networks, LLC v. Google LLC*, 315 F.Supp.3d 933, 966 (E.D. Tex. 2018) (holding that Google's GGC servers are a "place of business"). Defendants' GGC is a regular and established place of business. YouTube and Google content is delivered through the GGC.

THE ASSERTED PATENTS

13.   On June 29, 2010, the United States Patent Office issued the '676 patent titled "Selecting An Advertising Message For Presentation On A Page Of A Publisher Web Site

3

Based Upon Both User History And Page Context," naming Basem Nayfeh and Andrew Chen as the inventors. A true and correct copy of the '676 patent is attached as Exhibit A.

14.   On February 1, 2011, the United States Patent Office issued the '175 patent titled "Selecting An Advertising Message For Presentation On A Page Of A Publisher Web Site Based Upon Both User History And Page Context," naming Basem Nayfeh and Andrew Chen as inventors. A true and correct copy of the '175 patent is attached as Exhibit B.

15.   On December 20, 2011, the United States Patent Office issued the '298 patent titled "Selecting An Advertising Message For Presentation On A Page Of A Publisher Web Site Based Upon Both User History And Page Context," naming Basem Nayfeh and Andrew Chen as inventors. A true and correct copy of the '298 patent is attached as Exhibit C.

16.   AudienceScience is the owner of all right, title, and interest in and to each of the Asserted Patents with full and exclusive right to bring suit to enforce the Asserted Patents, including the right to recover for past damages and/or royalties prior to the expiration of the Asserted Patents.

17.   The Asserted Patents are valid and enforceable.

COUNT I - INFRINGEMENT OF U.S. PATENT NO. 7,747,676

18.   Plaintiffs incorporate by reference the allegations contained in the preceding paragraphs of this Complaint as if fully set forth herein.

19.   Defendants have infringed and continue to infringe the '676 patent literally and/or under the doctrine of equivalents by making, using, selling, offering for sale, and/or importing into the United States, without authority, the Accused Products which perform each and every limitation of at least claim 1 of the '676 patent.

20.   Defendants perform a method using a computing system having a processor and a memory for selecting an advertising message for inclusion in a requested web page. For

example, Defendants operate servers (computing systems) that perform a method for selecting

an advertising message (display ads) for inclusion in a requested web page (YouTube,

Discovery, and Gmail web pages) (the "Accused Products").

21.   The Accused Products select advertisements to include in web pages and videos

that billions of users request. Google Discovery campaigns, for example, display ads to YouTube,

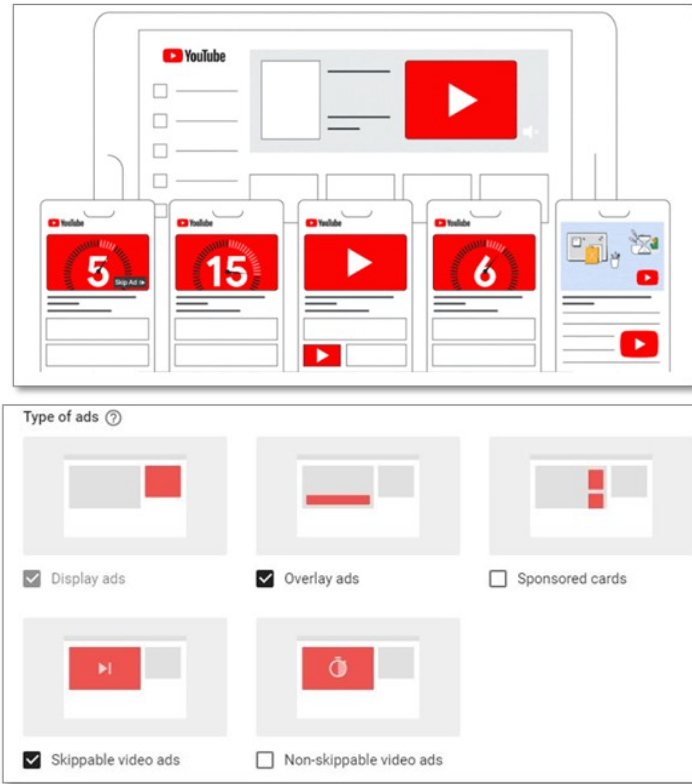Discover, and Gmail users, including ads for more than 1 billion hours of YouTube videos every

day.

Source: https://www.youtube.com/intl/en_us/ads/how-it-works/set-up-a-campaign/audience/

Source: https://support.google.com/google-ads/answer/9176876

22.   On youtube.com, Google and YouTube select video ads and "display ads" (images) to present on web pages, and to present before, during, and after requested videos.
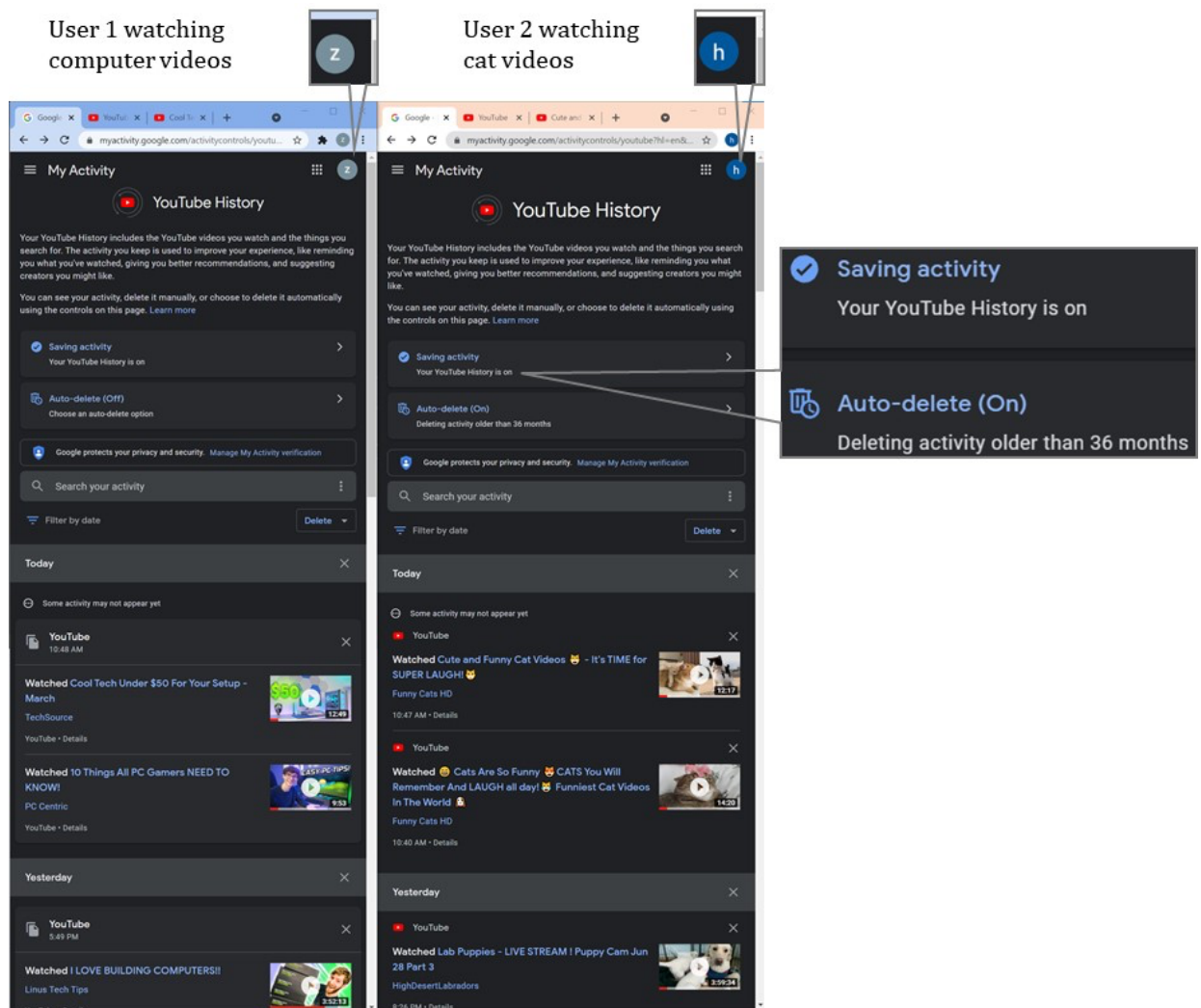

Sources: https://support.google.com/google-ads/answer/2375464; https://support.google.com/youtube/thread/26373380/bumper-ads-option-not-showing-in-my-youtube-studio

23.   The Accused Products receive user requests for YouTube pages that users identify, for example when a user types www.youtube.com in a web browser or clicks on a link to select a web page for a YouTube video.

24.   YouTube and Google add the user's requested page to YouTube and Google's profile   for   that   user.   For   example,   a   user's   Google   profile   at https://myactivity.google.com/activitycontrols/youtube?hl=en&utm_source=privacy-advisor-youtube&pli=1 lists the user's "YouTube History" of videos that a user has watched in the past 36 months or more, with links to the web pages that the user requested in order to view those videos. In the example below, Google shows the YouTube viewing histories of user 1 (logged in

to the blue-colored browser on the left) and user 2 (logged in to the peach-colored browser on the right).
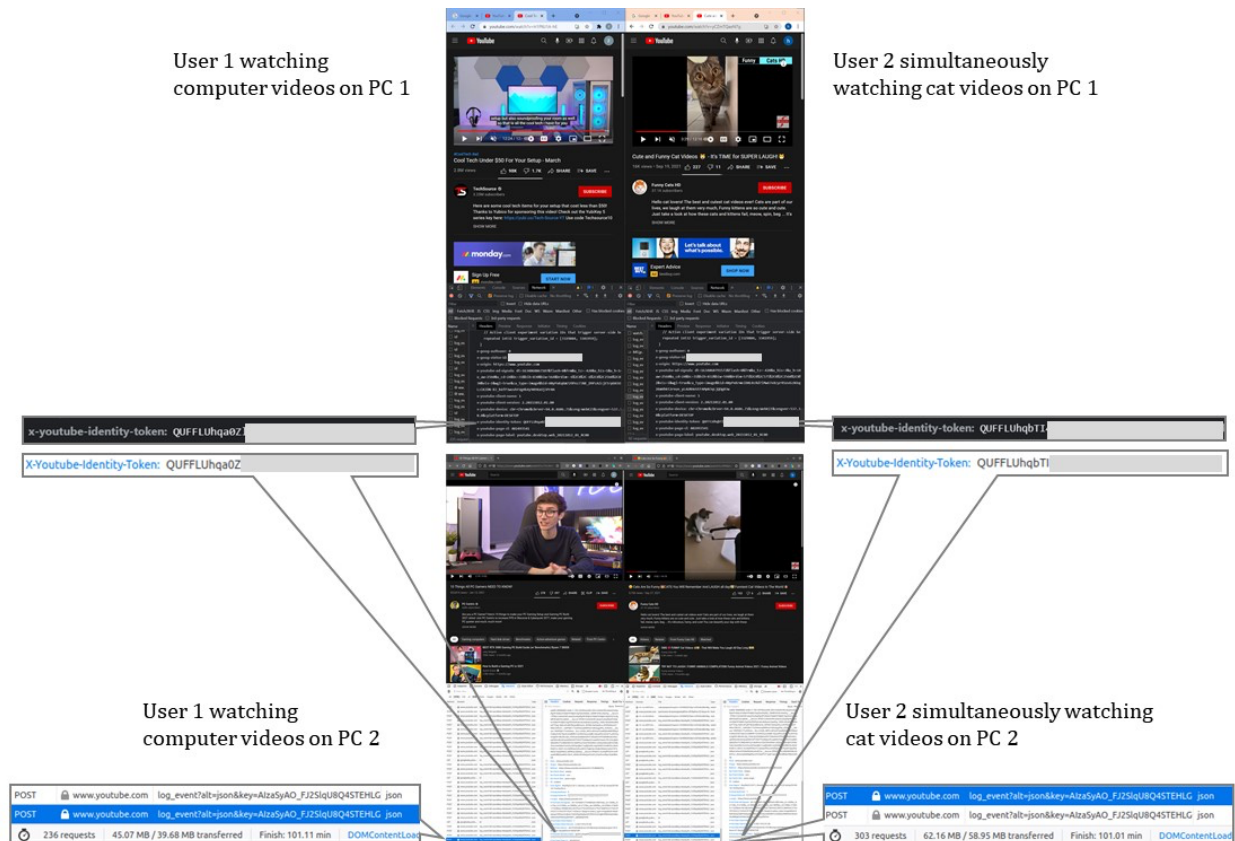

Source: Screenshot of Chrome browsers loading myactivity.google.com.

25.   YouTube and Google track users across devices. In the example below, YouTube and Google track the viewing history of 2 different users separately, even though both users are watching YouTube videos simultaneously, with 2 browser instances side-by-side, on 2 different computers.
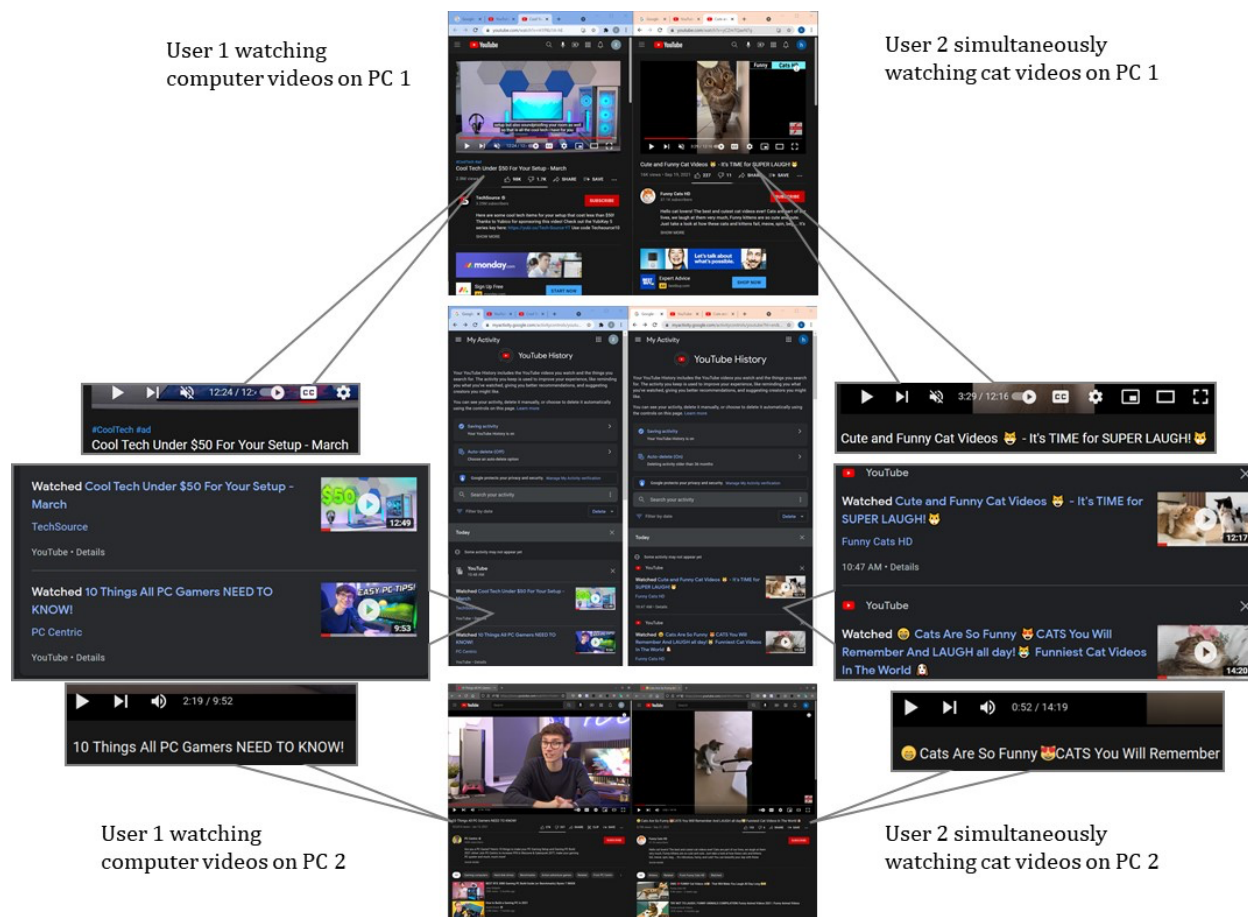
Source: Screenshot of Chrome and Firefox browsers loading youtube.com videos and myactivity.google.com.

26. Google tracks users by sending "log_event" data from user PCs to www.youtube.com. For example, an X-Youtube-Identity-Token that starts with "QUFFLUhq" and is different for different users, even though the users are viewing YouTube simultaneously on the same PC, and that is the same for the same user, even when the user views YouTube on different PCs and on different days.

User 1 watching computer videos on PC 1

User 2 simultaneously watching cat videos on PC 1

x-youtube-identity-token: QUFFLUhqa0Z

X-Youtube-Identity-Token: QUFFLUhqa0Z

x-youtube-identity-token: QUFFLUhqbTI

X-Youtube-Identity-Token: QUFFLUhqbTI

User 1 watching computer videos on PC 2

User 2 simultaneously watching cat videos on PC 2

POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG .json
POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG .json
236 requests   45.07 MB / 39.68 MB transferred   Finish: 101.11 min   DOMContentLoad

POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG .json
POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG .json
303 requests   62.16 MB / 58.95 MB transferred   Finish: 101.01 min   DOMContentLoad

Source: Screenshot of Chrome browsers and Chrome DevTools, and Firefox browsers and Developer Tools loading youtube.com.

27.   Defendants use a mapping from pages to keywords describing those pages to identify a set of keywords each mapped to from at least one of the pages listed in the page request history, and use a mapping from keywords to advertising messages described by those keywords to identify a set of advertising messages each mapped to from at least one of the identified set of keywords. For example, advertisers pay Google and YouTube to advertise using certain criteria, including keywords. Advertisers specify keywords that relate to their advertisements. Google and YouTube analyze YouTube and other web pages to characterize their YouTube videos and content. Google and YouTube use advertisements' keywords to select advertisements that relate to web pages and YouTube videos that a user viewed previously.

Video campaigns run on YouTube and across the web through Google Ads. By targeting your Video campaigns on YouTube and Google video partners, you can advertise to people at moments that matter. With a wide variety of targeting methods available to you, such as demographic groups, interests, placements, and your data segments, you can reach specific or niche audiences based on who they are, what they're interested in, and what content they're viewing.

- **Topics:** Target your video ads to specific topics on YouTube and the Google Display Network. Topic targeting lets you reach a broad range of videos, channels, and websites related to the topics you select. For example, if you target the "Automotive" topic, then your ad will show on YouTube to people watching videos about cars.
- **Keywords:** Depending on your video ad format, you can show your video ads based on words or phrases (keywords) related to a YouTube video, YouTube channel, or type of website that your audience is interested in.

Source: https://support.google.com/google-ads/answer/2454017)

Keyword targeting behaves differently depending on the networks you target:
- **YouTube search results:** We target the word or phrase people are using to search on YouTube.
- **YouTube videos** and Google video partners on the Display Network: We target the webpage content (contextual targeting).

Source:https://support.google.com/google-ads/answer/7131506#zippy=%2Cadd-content-targeting

28.   In its Display Network, Google presents ads based on content in web pages that a user previously viewed, even if that content is irrelevant to the page the user is currently viewing and where the ad appears. Google and YouTube do the same thing on YouTube, that is, select ads based on a user's previously-viewed web pages and YouTube videos.

Google Ads Help   🔍 Describe your issue

Keywords are one of the targeting options on the Display Network. Sometimes your ads may show on placements that seem unrelated to your keywords. Depending on your keyword setting, your ads instead may show to audiences based on their recent browsing history or other factors, rather than the content of the page they're currently viewing. Learn more at About contextual targeting.

Source: https://support.google.com/google-ads/answer/2453986?hl=en&ref_topic=3119131

29.   Defendants attribute to each of the identified set of advertising messages, a selection weighting reflecting the advertising message's relative performance, wherein the relative performance is determined by a performance score that indicates the extent to which the advertising message has generated revenue, and select one advertising message of the identified set of advertising messages in accordance with the selection weightings attributed to the advertising messages of the identified set of advertising messages. For example, Google runs an ad auction that identifies candidate ads. For every auction, Google attributes, to each advertisement in that auction, an "Ad Rank" score that includes the ad's expected clickthrough rate (CTR). CTR reflects the advertisement's performance including revenue that Google has generated from that advertisement (e.g., revenue from advertisers, who pay in a variety of ways including for impressions, or for clicks), and revenue that the advertiser has generated from the ad (e.g., impressions or clicks that led to sales). Google's ad auction selects zero or more winning advertisements for each auction, typically by selecting ads with the highest Ad Rank score.

Google Ads Help   🔍 Describe your issue

The ad auction is how Google decides which ads to show and how they're positioned.

Google Ads calculates Ad Rank for every ad in the auction. Ad Rank determines your ad position and whether your ads are eligible to show at all. Generally speaking, the ad with the highest Ad Rank gets to show in the top position and the ad with the second-highest Ad Rank gets to show in the second position (assuming the ads clear the relevant thresholds), and so on.

Every time someone does a search that triggers an ad that competes in an auction, we calculate an Ad Rank. This calculation incorporates your bid and auction-time measurements of expected CTR, ad relevance, and landing page experience, among other factors. To determine the auction-time quality components, we look at a number of different factors. By improving the following factors you can help improve the quality components of your Ad Rank:

- Your ad's expected clickthrough rate: This is partly based on your ad's historical clicks and impressions (adjusting for factors such as ad position, extensions, and other formats that may have affected the visibility of an ad that someone previously clicked)

Source: https://support.google.com/google-ads/answer/1722122

30.   Google's Ad Rank score includes the ad's expected clickthrough rate, which in turn reflects past clicks and impressions (see previous quote), which are among the ways Google generates revenue from advertisers.

Source: https://support.google.com/google-ads/answer/10276703

31.   Defendants respond to the page request with a version of the requested page that
includes an instruction to display the selected advertising message within the page. For
example, YouTube responds to the user's request for a YouTube page, such as
www.youtube.com, with a version of the page that is customized for the user. The web page
includes advertisements that won auctions for the relevant instance of the web page and any
YouTube video playing on the web page, and includes a collection of YouTube video
recommendations for that particular user.

32.   In the example below, YouTube sent 3 different users 3 different versions of the
page www.youtube.com simultaneously on the same computer. User 1 watched computer
videos, and the page for user 1 suggests computer videos and shows an ad for a Google phone
and cell phone plan. User 2 watched cat videos, and the page for user 2 recommends cat videos
and shows an ad for YouTube Ads. Guest user 3 watched a football video, and the page for user
3 shows an ad for YouTubeTV and recommends a football video.
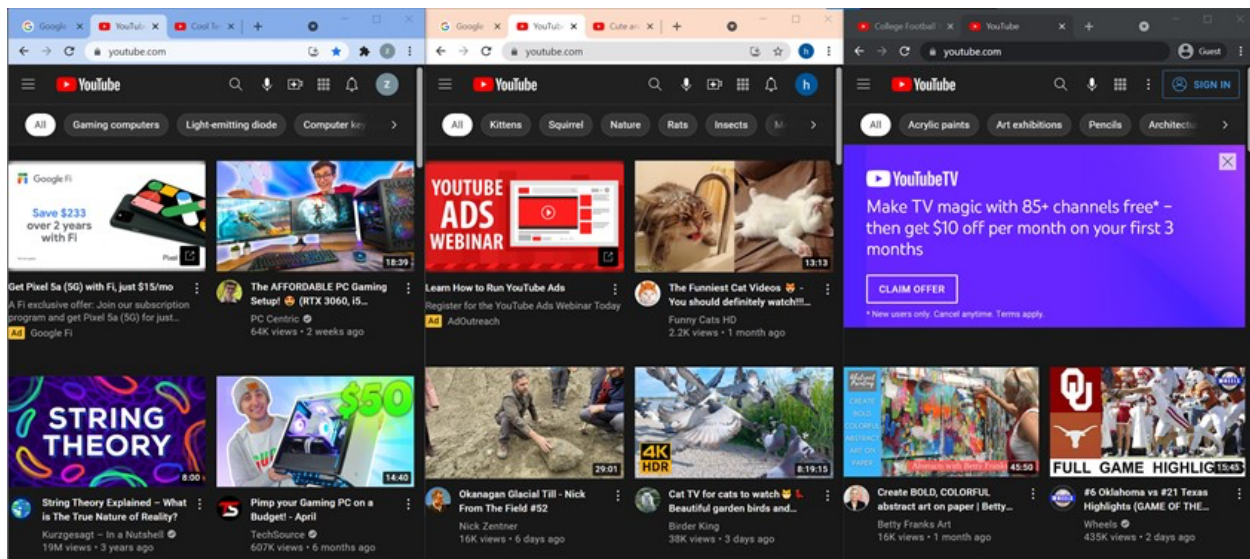
Source: Screenshot of Chrome browsers loading www.youtube.com.

33.   YouTube initially responds to the request for www.youtube.com with a visually empty html page that has a few lines of JavaScript.

14
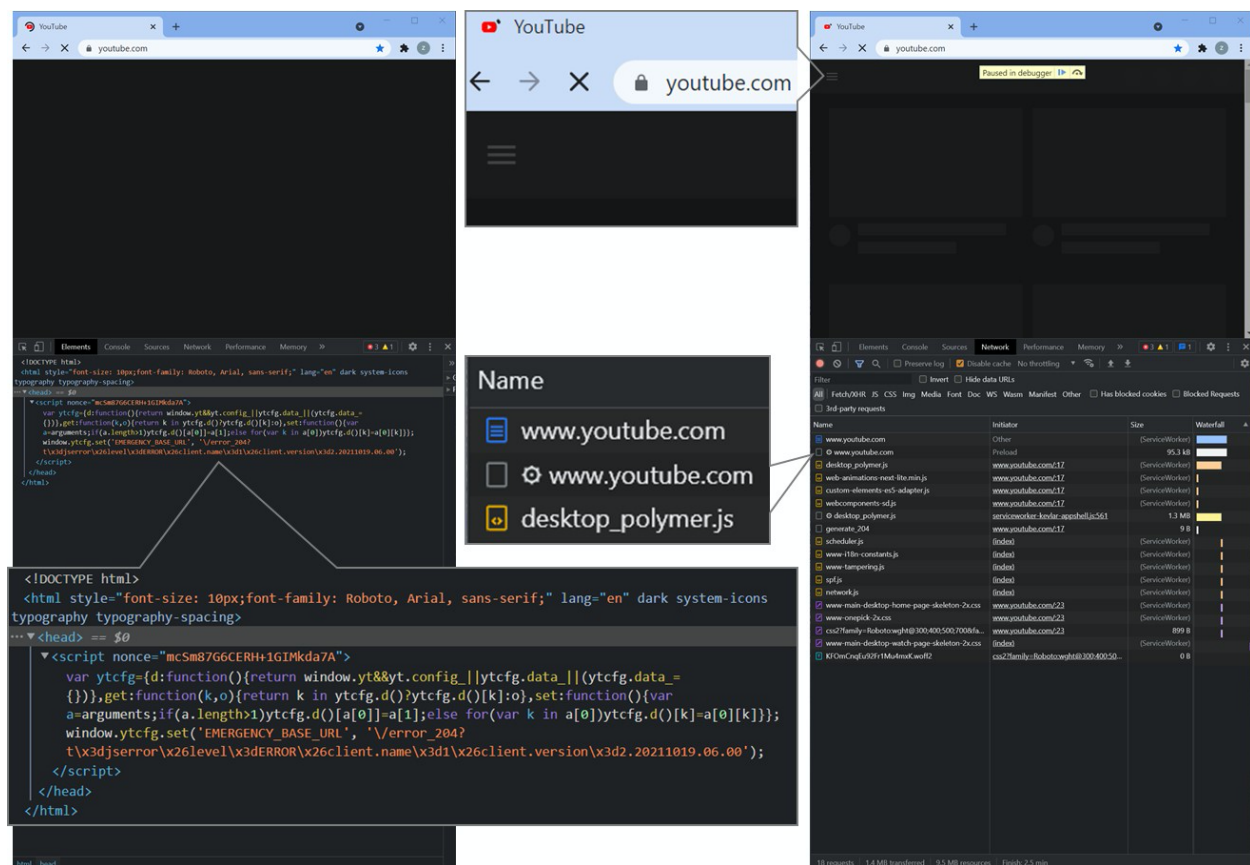
Source: Screenshot of Chrome browser and Chrome DevTools loading youtube.com.

34.   The JavaScript includes instructions to fetch additional JavaScript and data,

including an instruction to display the advertisement that won the Google advertising auction.
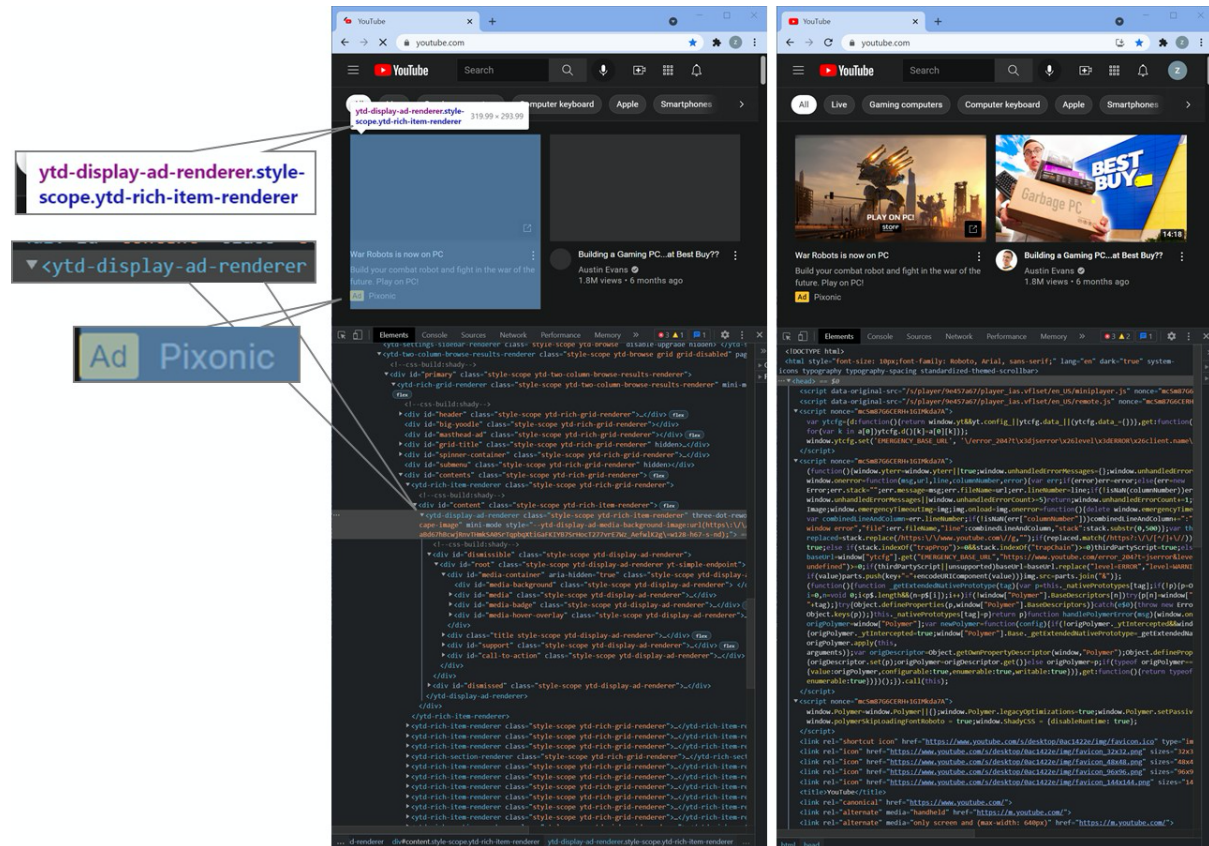
Source: Screenshot of Chrome browser and Chrome DevTools loading www.youtube.com.

35.   Google and YouTube servers include a processor, and memory that stores the code

that implements the actions described above when executed by the processor. For example,

Google teaches developers that ad servers generally consist of components and ad serving features

including ad selection and ad delivery, as depicted in the diagram below. Google's ad servers

store code that provides ad selection and ad delivery.
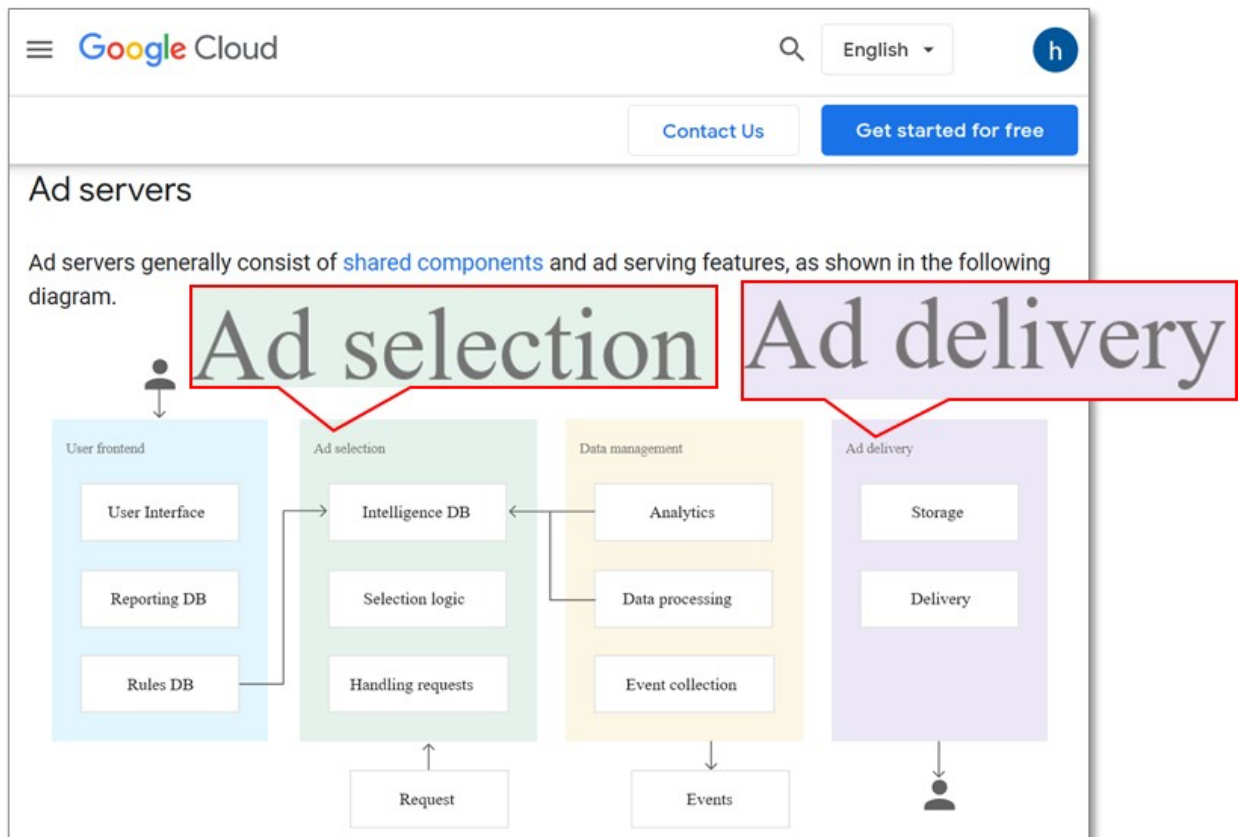
Source:https://cloud.google.com/architecture/infrastructure-options-for-building-advertising-platforms#shared_components

36.   For example, Google teaches developers that a user web page loads the

Interactive Media Ads (IMA) SDK (step 1 in the diagram below) and an ad server selects an ad

by, for example, running an auction, and sends selected ads to the user web page (step 3 below).

Google and YouTube servers store code on servers including ad servers, and that code runs

auctions and delivers ads to user devices that load YouTube web pages such as

www.youtube.com.

The following diagram illustrates and annotates the interactions between your video player, the IMA SDK, and an ad server. The ad server can use Ad Manager, AdSense for Video (AFV), or Ad Exchange (AdX).

1. The web page or app loads the IMA SDK via:
   - an embedded script tag for HTML5
   - a native app for Android, Google Cast, iOS, or tvOS
2. The IMA SDK requests a VAST Response for the specific Ad Unit on the ad server. The ad server called, which can be either Ad Manager vs AFV/AdX, is determined by the ad tag URL.
3. The ad server selects the best ad and sends a VAST response to the IMA SDK. Ads are selected using one of the following methods:
   - Ad Manager Ad Unit filters Line Item candidates
   - AdSense/Ad Exchange runs an auction
4. The IMA SDK parses the VAST response, determines the correct media type based on environment, and delivers the in-line video creative (and companion ads if needed) to the web page or app.
5. The video player negotiates the playback details with the IMA SDK and plays the ads.
6. The IMA SDK fires an impression ping and VAST tracking events, as needed.

Source: https://developers.google.com/interactive-media-ads/docs/sdks/html5/client-side/architecture

37.   Defendants were made aware of the '676 patent and their infringement thereof at least as early as November 18, 2021 when Revitalization Partners provided notice of Defendants' infringement of the '676 patent to Sundar Pichai of Google and Susan Wojcicki of YouTube. From the date of their receipt of notice, Defendants' infringement of the '676 patent was willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.,* 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 18, 2021 Defendants willfully infringed the '676 patent by refusing to take a license and continuing to make, use, test, sell, license, and/or offer for sale/license the Accused Products. Defendants were aware that they infringed the '676 patent since at least November 18, 2021 and instead of taking a license,

opted to make the business decision to "efficiently infringe" the '676 patent. In doing so, Defendants willfully infringed the '676 Patent.

38.   Defendants' infringement has damaged and injured and continues to damage and injure Plaintiffs.
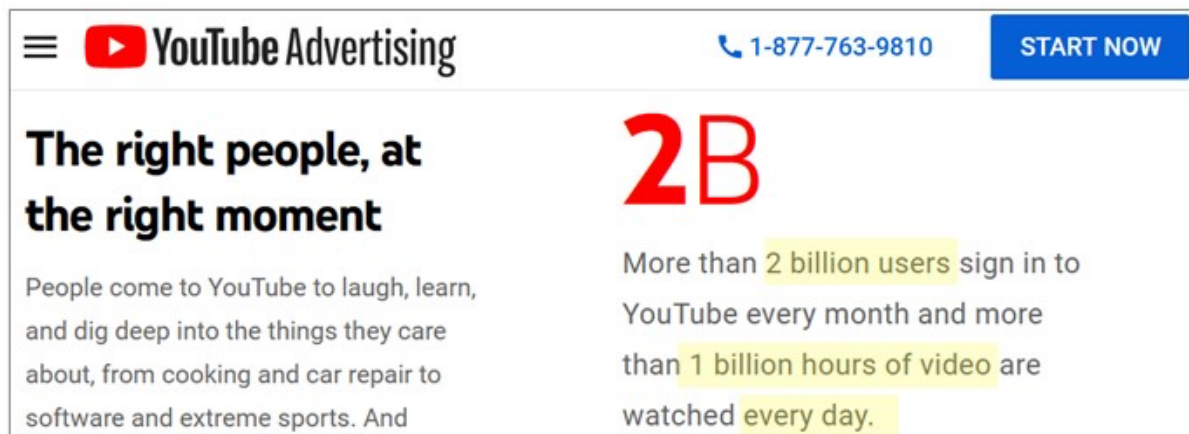
COUNT II - INFRINGEMENT OF U.S. PATENT NO. 7,882,175

39.   Plaintiffs incorporate by reference the allegations contained in the preceding paragraphs of this Complaint as if fully set forth herein.

40.   Defendants have infringed and continue to infringe the '175 patent literally and/or under the doctrine of equivalents by making, using, selling, offering for sale, and/or importing into the United States, without authority, the Accused Products which contain each and every limitation of at least claim 12 of the '175 patent.

41.   Defendants operate a computer-readable storage device whose contents cause a computing system to perform a method for designating an advertising message for inclusion in a requested web page. For example, Defendants operate servers (computing systems) that include hard drives (computer-readable storage devices) that perform a method for designating an advertising message (display ads) for inclusion in a requested web page (YouTube, Discovery, and Gmail web pages) (the "Accused Products").

42.   The Accused Products select advertisements to include in web pages and videos that billions of users request. Google Discovery campaigns, for example, display ads to YouTube, Discover, and Gmail users, including ads for more than 1 billion hours of YouTube videos every day.

Source: https://www.youtube.com/intl/en_us/ads/how-it-works/set-up-a-campaign/audience/

Source: https://support.google.com/google-ads/answer/9176876

43.   On youtube.com, Google and YouTube select video ads and "display ads" (images) to present on web pages, and to present before, during, and after requested videos.

Sources: https://support.google.com/google-ads/answer/2375464;
https://support.google.com/youtube/thread/26373380/bumper-ads-option-not-showing-in-my-youtube-studio

44.   The Accused Products receive user requests for YouTube pages that users identify,

for example when a user types www.youtube.com in a web browser or clicks on a link to select a

web page for a YouTube video.

45.   Defendants identify a set of subjects each relating to at least one of a set of web

pages recently visited by the user, the set of web pages including the requested web page by

virtue of the web page request for the requested web page. For example, advertisers pay Google

and YouTube to advertise using certain criteria, including subjects ("topics"). Advertisers

specify topics that relate to their advertisements. Google and YouTube analyze YouTube and

other web pages to characterize their YouTube videos and content. Google and YouTube use

advertisements' topics to select advertisements that relate to web pages and YouTube videos

that a user viewed previously.

Source: https://support.google.com/google-ads/answer/2454017

Source: https://support.google.com/google-ads/answer/2497832

46.   In its Display Network, Google presents ads based on content in web pages that a user previously viewed, even if that content is irrelevant to the page the user is currently viewing and where the ad appears. Google and YouTube do the same thing on YouTube for topics, that is, select ads based on the topics in a user's previously-viewed web pages and YouTube videos.

Google Ads Help   🔍 Describe your issue

Keywords are one of the targeting options on the Display Network. Sometimes your ads may show on placements that seem unrelated to your keywords. Depending on your keyword setting, your ads instead may show to audiences based on their recent browsing history or other factors, rather than the content of the page they're currently viewing. Learn more at About contextual targeting.

Source: https://support.google.com/google-ads/answer/2453986?hl=en&ref_topic=3119131

47.   In its Display Network, Google analyzes web pages to determine each page's subject ("topic" or "central theme") in order to match the subject of a page (the page a user is currently viewing, or a page in a "visitor's recent browsing history") with advertisements' topics and keywords. Google and YouTube do the same thing on YouTube.

Google Ads Help   🔍 Describe your issue

Contextual targeting

The process that matches ads to relevant sites in the Display Network using your keywords or topics, among other factors.

- Here's how it works: Google's system analyzes the content of each webpage to determine its central theme, which is then matched to your ad using your keywords and topic selections, your language and location targeting, a visitor's recent browsing history, and other factors.

Source: https://support.google.com/google-ads/answer/1726458
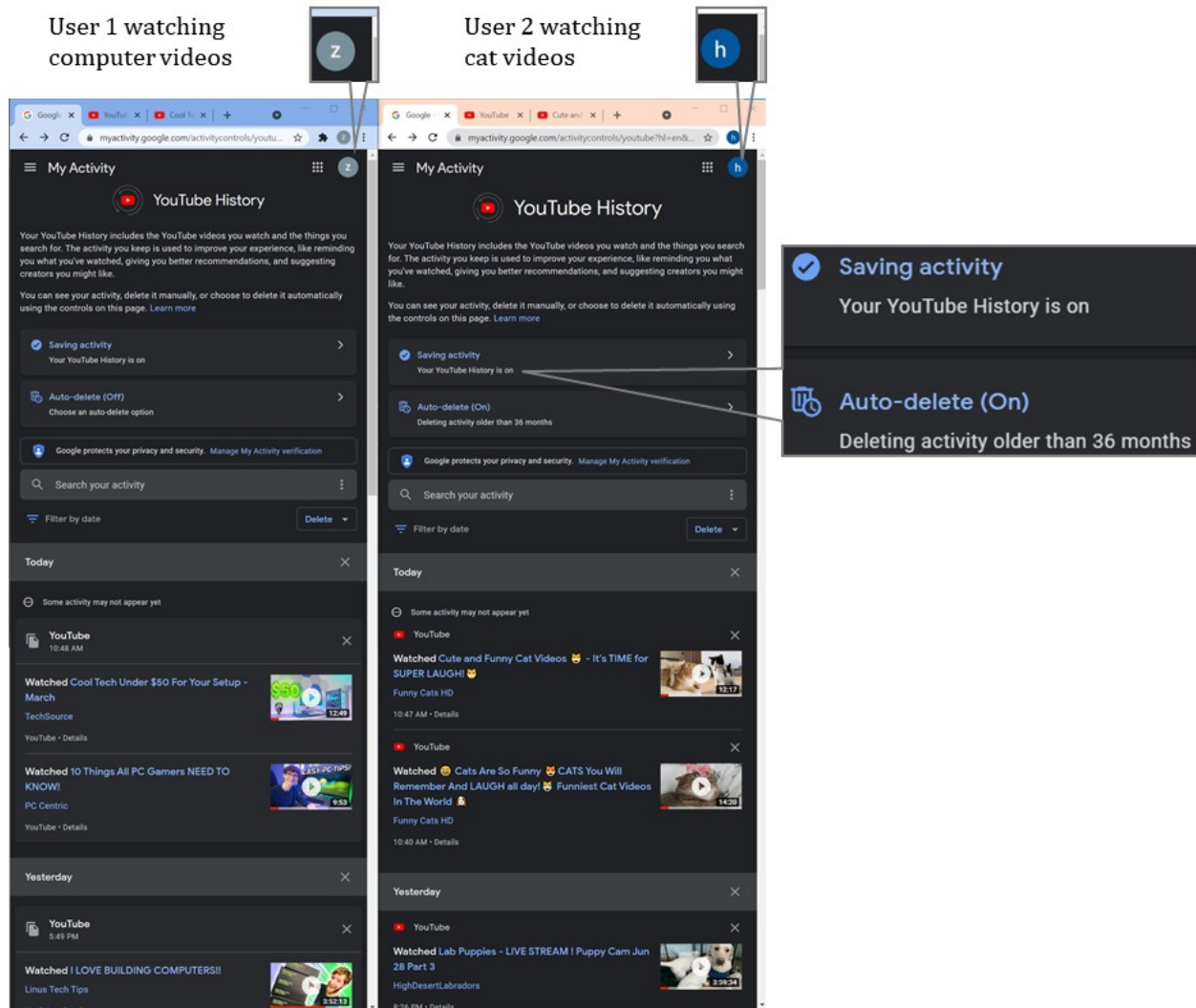
Google Ads Help   🔍 Describe your issue

- **Google Display Network:** If you've chosen to show ads on Display Network sites, Google Ads uses your keywords to place your ads next to content that matches your ads. Google's technology scans the content and web address of a webpage and automatically displays ads with keywords that closely match the subject or web address of the page. For example, on a webpage that includes brownie recipes, Google Ads might show ads about chocolate brownies or delicious dessert recipes. Learn how to choose your keywords for Display Network campaigns.

Source: https://support.google.com/google-ads/answer/1704371?hl=en&ref_topic=3119131

48.   YouTube and Google add the user's requested page to YouTube and Google's profile for that user. For example, a user's Google profile at

https://myactivity.google.com/activitycontrols/youtube?hl=en&utm_source=privacy-advisor-

youtube&pli=1 lists the user's "YouTube History" of videos that a user has watched in the past

36 months or more, with links to the web pages that the user requested in order to view those

videos. In the example below, Google shows the YouTube viewing histories of user 1 (logged

in to the blue-colored browser on the left) and user 2 (logged in to the peach-colored browser on

the right).

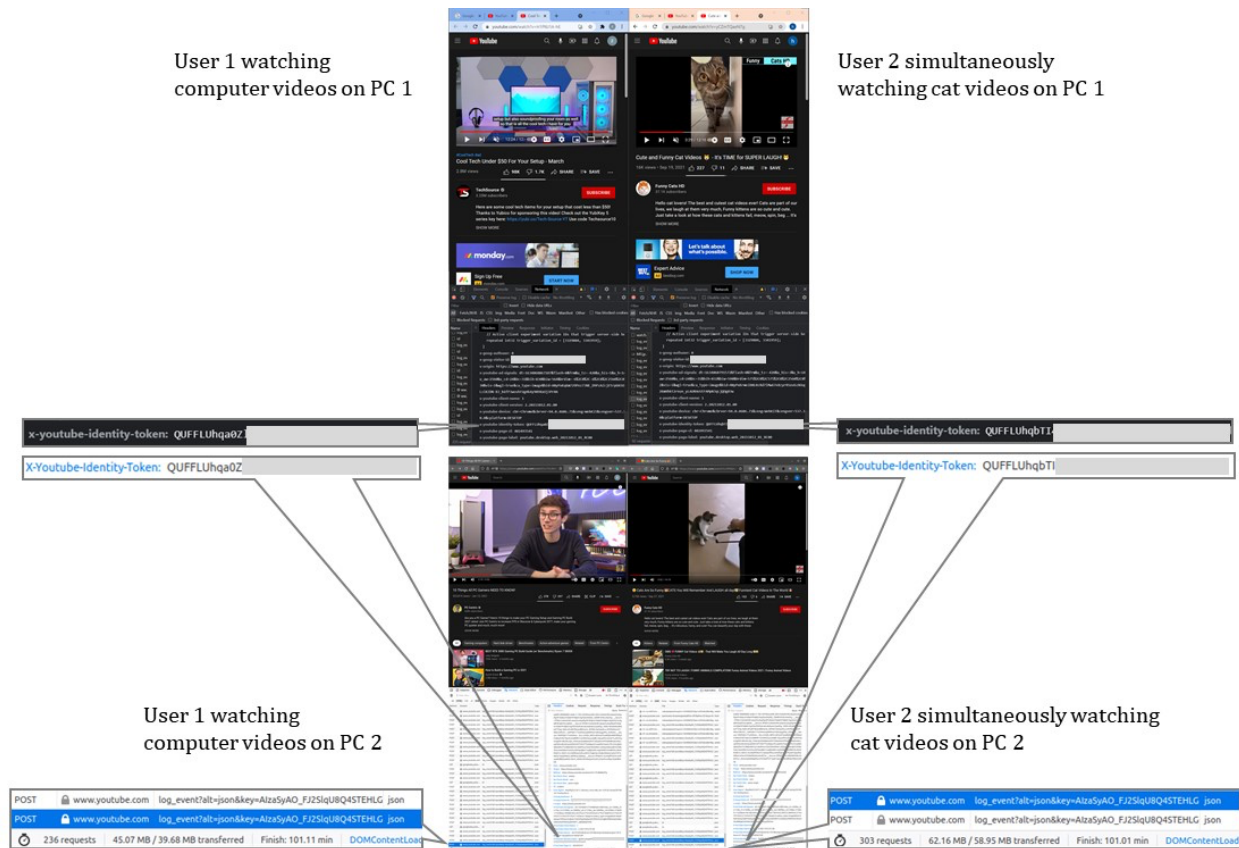**Source:** Screenshot of Chrome browsers loading myactivity.google.com.

49.   YouTube and Google track users across devices. In the example below,

YouTube and Google track the viewing history of 2 different users separately, even though both

users are watching YouTube videos simultaneously, with 2 browser instances side-by-side, on 2

different computers.
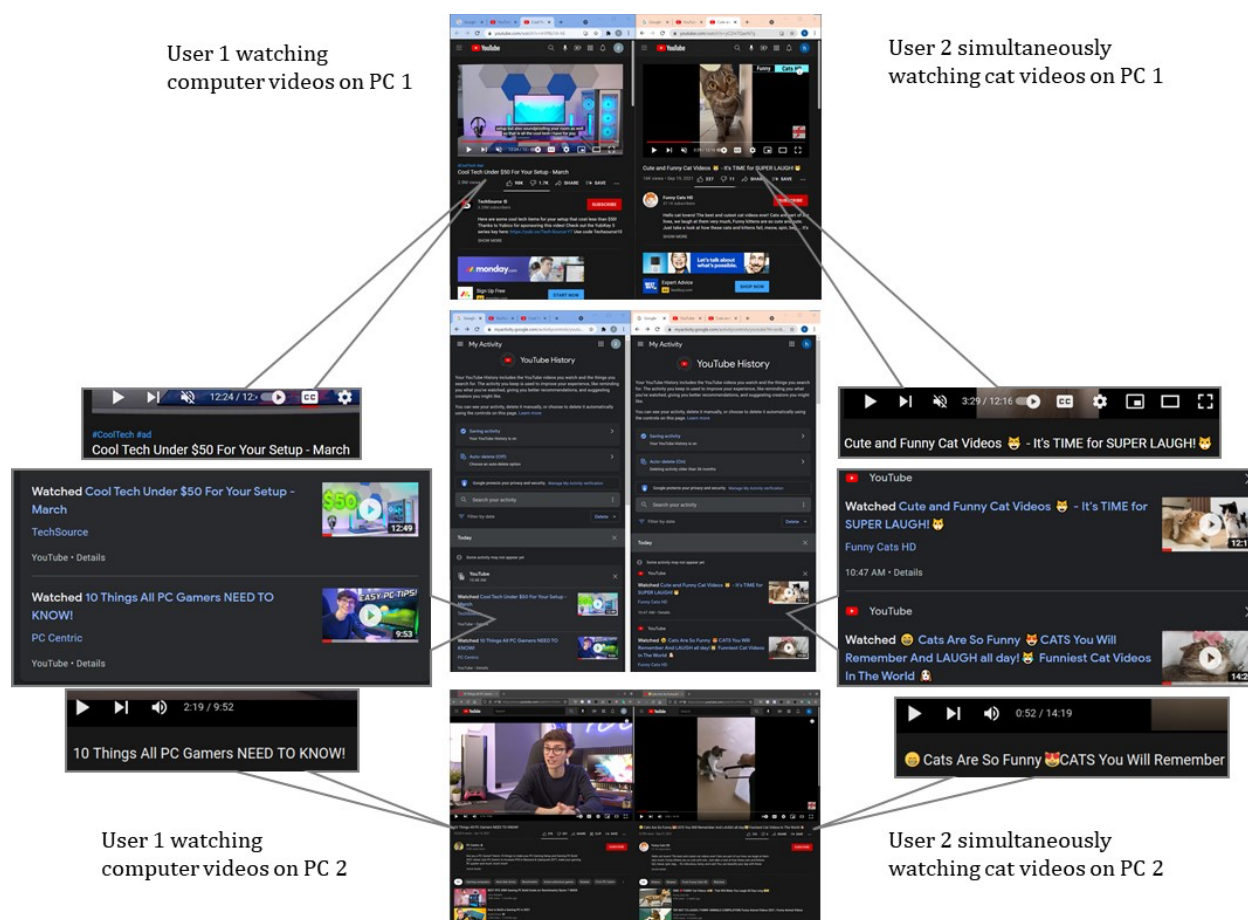
Source: Screenshot of Chrome and Firefox browsers loading www.youtube.com videos and myactivity.google.com

50.   Google tracks users by sending "log_event" data from user PCs to

www.youtube.com, e.g., an X-Youtube-Identity-Token that starts with "QUFFLUhq" and is

different for different users, even though the users are viewing YouTube simultaneously on the

same PC, and that is the same for the same user, even when the user views YouTube on

different PCs and on different days.

User 1 watching computer videos on PC 1

User 2 simultaneously watching cat videos on PC 1

x-youtube-identity-token: QUFFLUhqa0Z

X-Youtube-Identity-Token: QUFFLUhqa0Z

x-youtube-identity-token: QUFFLUhqbTI

X-Youtube-Identity-Token: QUFFLUhqbTI

User 1 watching computer videos on PC 2

User 2 simultaneously watching cat videos on PC 2

POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG   json
POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG   json
236 requests   45.07 MB / 39.68 MB transferred   Finish: 101.11 min   DOMContentLoad

POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG   json
POST   www.youtube.com   log_event?alt=json&key=AIzaSyAO_FJ2SlqU8Q4STEHLG   json
303 requests   62.16 MB / 58.95 MB transferred   Finish: 101.01 min   DOMContentLoad

Source: Screenshot of Chrome browsers and Chrome DevTools, and Firefox browsers and Developer Tools loading youtube.com.

51.   Defendants select from among the set of subjects, one subject in accordance with a selection weighting for each subject based upon a performance score attributed to the subject that reflects the performance of advertising messages selected using the subject, wherein the performance score indicates the extent to which the advertising messages selected using the subject have generated revenue. For example, Google tracks the performance of keywords and topics in Google and YouTube advertising. Google shares some of that data with its advertising customers, and uses that data for multiple purposes including automated advertisement bidding. The performance of keywords and topics indicates the extent to which advertising messages selected using those keywords or topics have generated revenue.

52.   For example, Google "Smart Bidding" tracks advertisement keyword performance including conversions. Google also tracks advertisement topic performance.

> The programmatic bidding algorithm is able to learn from how well publishers, keywords, and targeting performs from aggregate conversion data, as well as evaluate all historical performance at the advertiser domain level. As a result of using this pre-existing learning, Google Smart Bidding performs best by opting in new campaigns to ECPC, Maximize Conversions or Target CPA from Day 1. These campaigns typically outperform Manual CPC bidding even during the 2-4 week learning period. During the learning period, the bidding algorithm learns even more about what works for the specific advertiser and campaign to further improve performance.

Source: https://services.google.com/fh/files/misc/gda_smart_bidding_guide.pdf, p. 7

53.   Google shares some of that keyword conversion performance data with advertisers. Conversion tracking indicates the extent to which advertisements using the keyword have generated revenue for advertisers because, for example, conversions include purchases by customers who viewed the advertisement.

Google Ads Help   🔍 Describe your issue

> • Conversion tracking is an advanced feature that shows you which keywords most often lead customers to take the actions you want them to take (these actions, such as a purchase or newsletter signup, are called *conversions*). Tracking your conversions can help you decide whether to increase your max CPC for keywords that are performing well, and decrease it for those that are underperforming. Conversion tracking is a requirement for using certain automated bid strategies, including ECPC with Search and Shopping campaigns, Target CPA, and Target ROAS. Learn more About automated bidding.

Source: https://support.google.com/google-ads/answer/2472712

54.   Conversions also indicate the extent to which advertisements have generated revenue for Google because advertisers pay for conversions.

Google Ads Help   Q Describe your issue

In addition to these bidding strategies, you can choose to pay for clicks, pay for conversions, or pay for viewable impressions.

Payment mode	Description	Compatible bidding strategies
Pay for clicks	Pay the cost for every user who clicks on your ad	Maximize conversions Target CPA Target ROAS
Pay for conversions	Pay the cost for every user who converts on your ad	Eligible advertisers using Target CPA
Pay for viewable impressions	Pay the cost for every viewable impression seen by users you target	Target CPA (when bidding towards click-through and view-through conversions)*

Source: https://support.google.com/google-ads/answer/10276703

55.   As another example, Google "Expansion" selects additional topics and keywords that are tied to additional advertisements if data suggests that the keywords will lead to conversions – which indicates the extent to which advertisements using those keywords have generated revenue (see previous discussion of conversion tracking). When Google expands to include additional topics, Google tracks whether those topics will likely lead to conversions.

Google Ads Help   Q Describe your issue

Expansion currently works across most display targeting tactics. For example:

- For contextual targeting, such as content keywords, expansion is based on the keywords you're currently targeting. Google Ads will expand to additional, semantically relevant keywords or topics. So if your keyword is "pens," the first stage of slider may extend to "felt-tip pens" and "ballpoint pens," but the maximum reach stage might show your ads in contexts related to "whiteboard markers" or "mechanical pencils"—if there's data to suggest that those keywords will lead to conversions.

Source: https://support.google.com/google-ads/answer/190596

56.   Defendants respond to the web page request with a version of the requested web page that includes an instruction to select an advertising message for display within the web

page on the basis of the selected subject. For example, YouTube responds to the user's request

for a YouTube page, such as www.youtube.com, with a version of the page that is customized

for the user. The web page includes advertisements that won auctions for the relevant instance

of the web page and any YouTube video playing on the web page, and includes a collection of

YouTube video recommendations for that particular user.

57.   In the example below, YouTube sent 3 different users 3 different versions of the

page www.youtube.com simultaneously on the same computer. User 1 watched computer

videos, and the page for user 1 suggests computer videos and shows an ad for a Google phone

and cell phone plan. User 2 watched cat videos, and the page for user 2 recommends cat videos

and shows an ad for YouTube Ads. Guest user 3 watched a football video, and the page for user

3 shows an ad for YouTubeTV and recommends a football video.
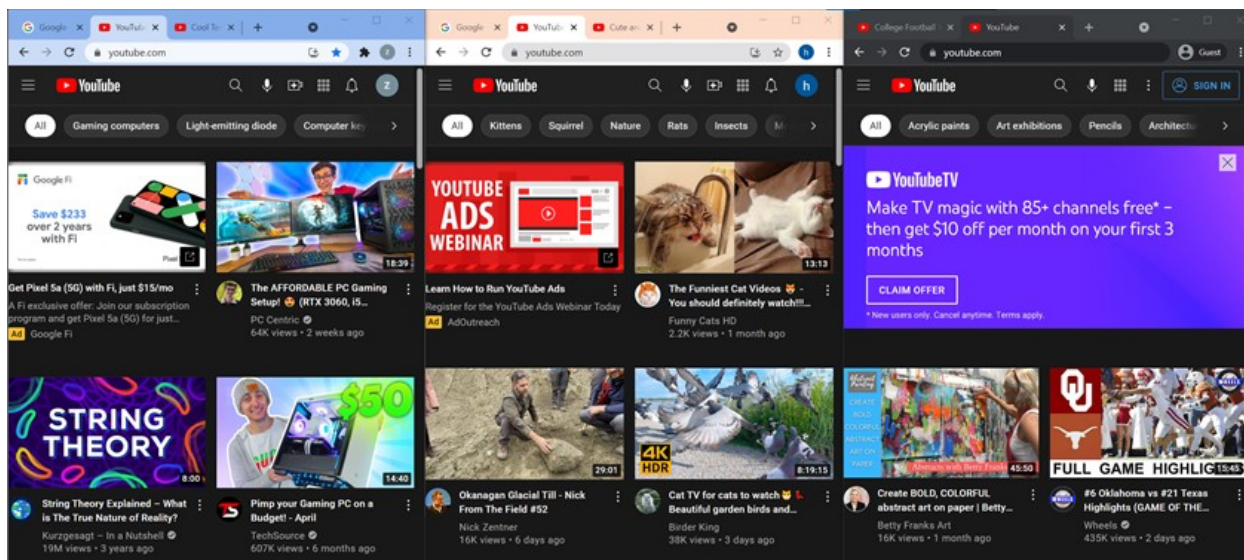
Source: Screenshot of Chrome browsers loading youtube.com.

58.   YouTube initially responds to the request for www.youtube.com with a visually

empty html page that has a few lines of JavaScript.
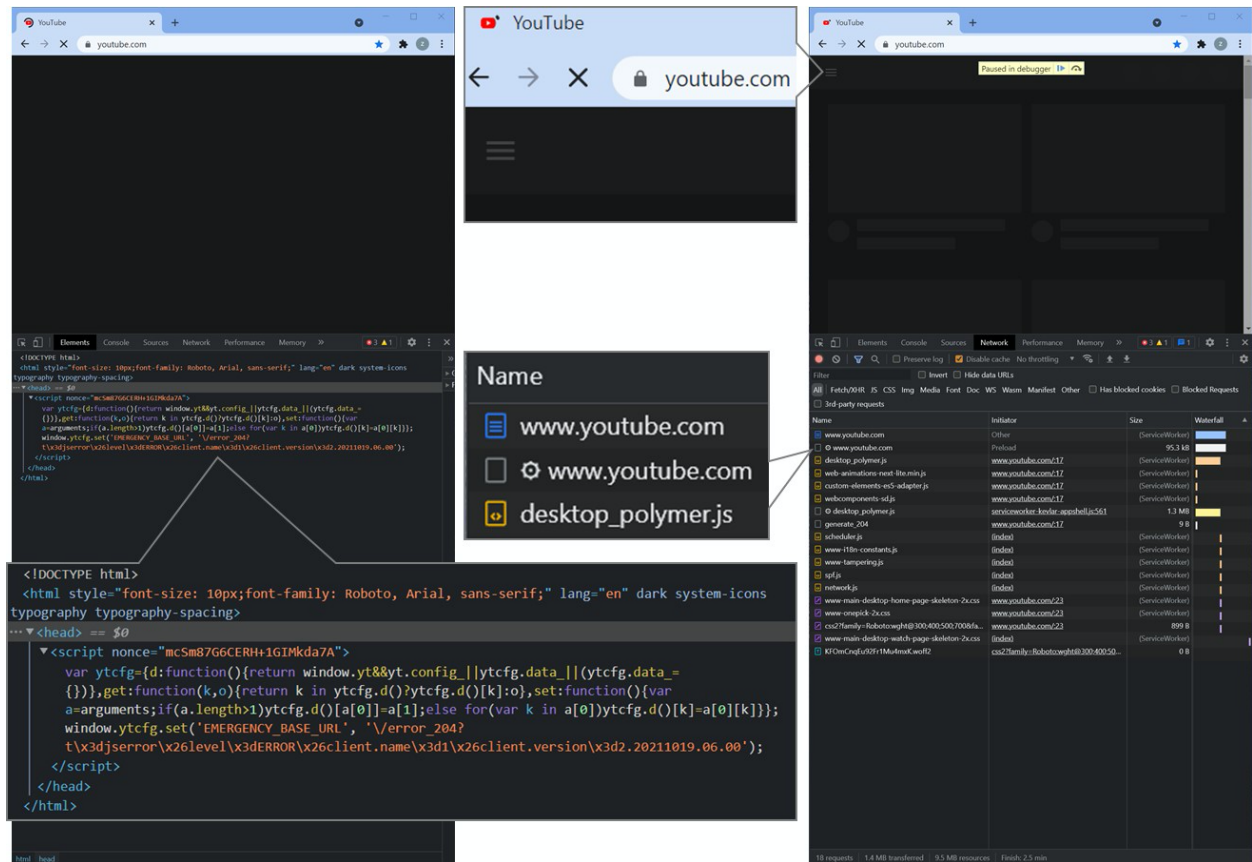
Source: Screenshot of Chrome browser and Chrome DevTools loading youtube.com.

59.   The JavaScript includes instructions to fetch additional JavaScript and data.

Google runs an advertisement auction and the browser displays the winning advertisement(s).

The web page includes an instruction to select an advertisement based on the subject that

Google selected.
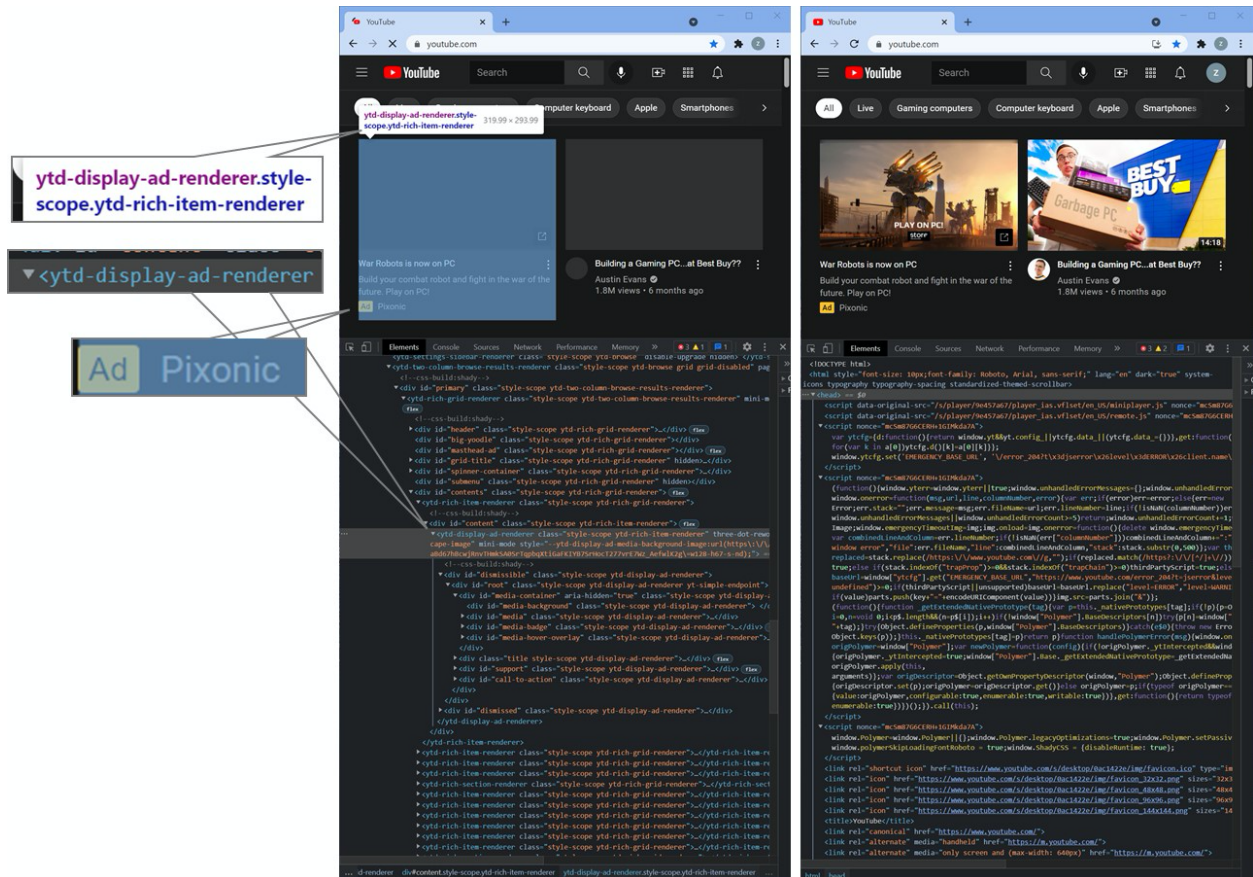
Source: Screenshot of Chrome browser and Chrome DevTools loading youtube.com.

60.   Defendants were made aware of the '175 patent and their infringement thereof at least as early as November 18, 2021 when Revitalization Partners provided notice of Defendants' infringement of the '175 patent to Sundar Pichai of Google and Susan Wojcicki of YouTube. From the date of their receipt of notice, Defendants' infringement of the '676 patent was willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.,* 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 18, 2021 Defendants willfully infringed the '175 patent by refusing to take a license and continuing to make, use, test, sell, license, and/or offer for sale/license the Accused Products. Defendants were aware that they infringed the '175 patent since at least November 18, 2021 and instead of taking a license, opted to make the business decision to "efficiently infringe" the '175 patent. In doing so, Defendants willfully infringed the '175 Patent.

61.   Defendants' infringement has damaged and injured and continues to damage and injure Plaintiffs.
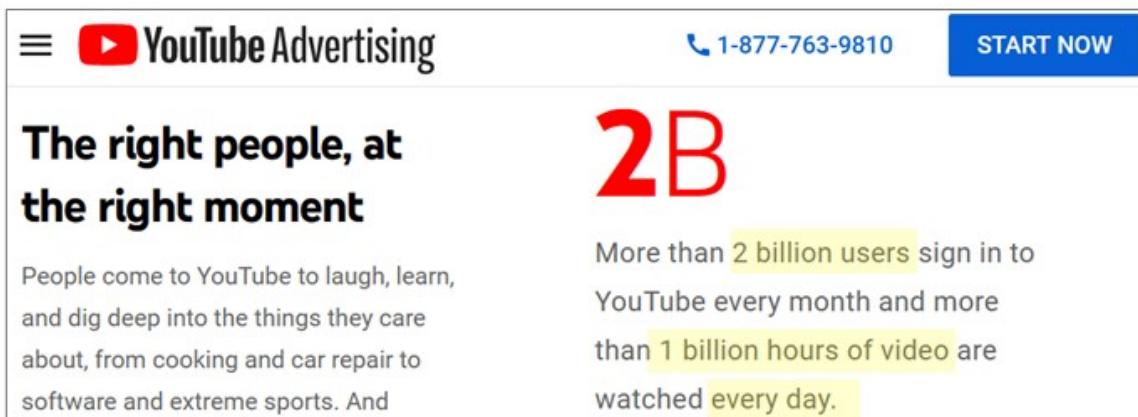
COUNT III - INFRINGEMENT OF U.S. PATENT NO. 8,082,298

62.   Plaintiffs incorporate by reference the allegations contained in the preceding paragraphs of this Complaint as if fully set forth herein.

63.   Defendants have infringed and continue to infringe the '298 patent literally and/or under the doctrine of equivalents by making, using, selling, offering for sale, and/or importing into the United States, without authority, the Accused Products which contain each and every limitation of at least claim 12 of the '298 patent.

64.   Defendants operate a computer-readable device whose contents cause a computing system to perform a method for designating an advertising message for inclusion in a requested web page. For example, Defendants operate servers (computing systems) that include hard drives (computer-readable devices) that perform a method for designating an advertising message (display ads) for inclusion in a requested web page (YouTube, Discovery, and Gmail web pages) (the "Accused Products").

65.   Google and YouTube servers include computer readable storage having contents that cause a computing system to select advertisements to include in web pages and videos that billions of users request. Google Discovery campaigns, for example, display ads to YouTube, Discover, and Gmail users, including ads for more than 1 billion hours of YouTube videos every day.

Source: https://www.youtube.com/intl/en_us/ads/how-it-works/set-up-a-campaign/audience/

Source: https://support.google.com/google-ads/answer/9176876

66.   On youtube.com, Google and YouTube select video ads and "display ads" (images) to present on web pages, and to present before, during, and after requested videos.

Sources: https://support.google.com/google-ads/answer/2375464;
https://support.google.com/youtube/thread/26373380/bumper-ads-option-not-showing-in-my-youtube-studio

67.   The Accused Products receive user requests for YouTube pages that users identify, for example when a user types www.youtube.com in a web browser or clicks on a link to select a web page for a YouTube video.

68.   Google and YouTube identify a set of keywords each relating to at least one of a set of web pages recently visited by the user. For example, advertisers pay Google and YouTube to advertise using certain criteria, including keywords. Advertisers specify keywords that relate to their advertisements. Google and YouTube analyze YouTube and other web pages to characterize their YouTube videos and content. Google and YouTube use advertisements' keywords to select advertisements that relate to web pages and YouTube videos that a user viewed previously.

Source: https://support.google.com/google-ads/answer/2454017

Source: https://support.google.com/google-ads/answer/7131506#zippy=%2Cadd-content-targeting

69.   In its Display Network, Google presents ads based on content in web pages that a user previously viewed, even if that content is irrelevant to the page the user is currently viewing and where the ad appears. Google and YouTube do the same thing on YouTube, that is, select ads based on a user's previously-viewed web pages and YouTube videos.

Source: https://support.google.com/google-ads/answer/2453986?hl=en&ref_topic=3119131

70.   YouTube and Google add the user's requested page to YouTube and Google's profile for that user.   For example, a user's Google profile at https://myactivity.google.com/activitycontrols/youtube?hl=en&utm_source=privacy-advisor-youtube&pli=1 lists the user's "YouTube History" of videos that a user has watched in the past 36 months or more, with links to the web pages that the user requested in order to view those videos. In the example below, Google shows the YouTube viewing histories of user 1 (logged in to the blue-colored browser on the left) and user 2 (logged in to the peach-colored browser on the right).

Source: Screenshot of Chrome browsers loading myactivity.google.com.

71.   YouTube and Google track users across devices. In the example below, YouTube and Google track the viewing history of 2 different users separately, even though both users are watching YouTube videos simultaneously, with 2 browser instances side-by-side, on 2 different computers.
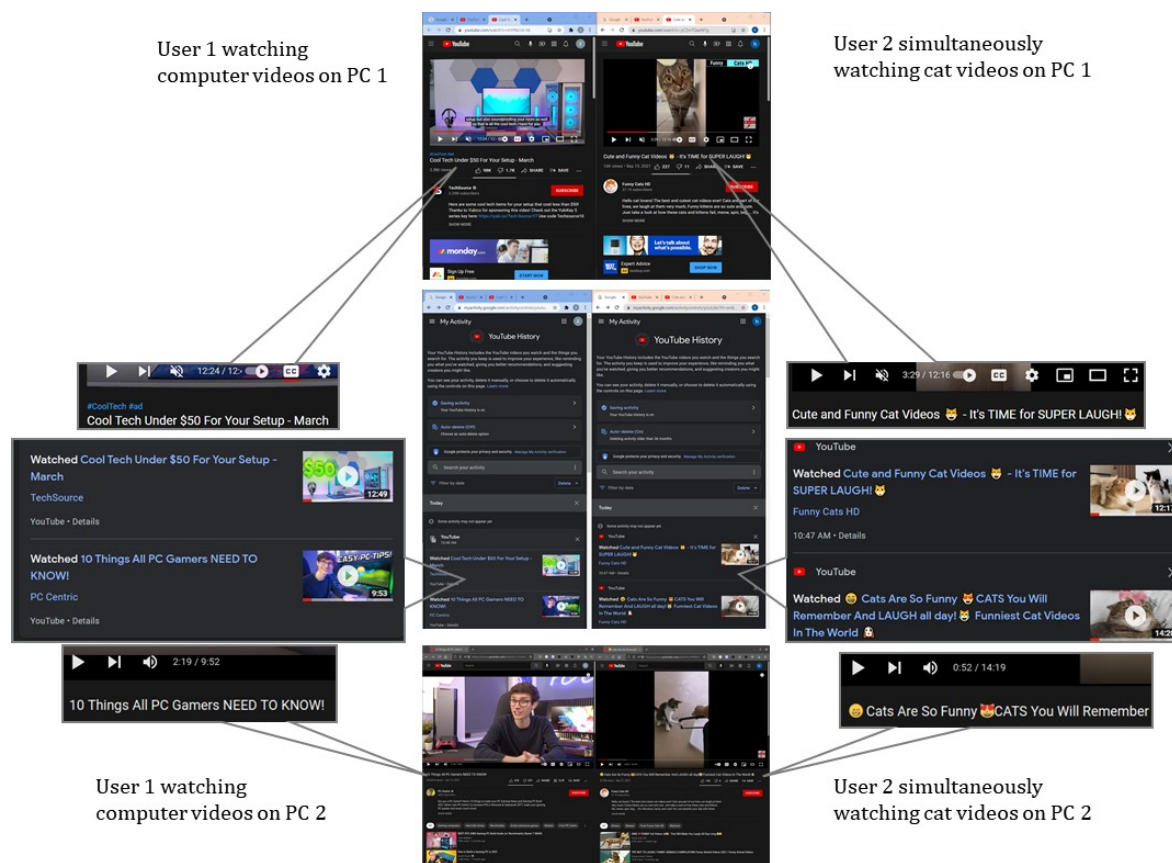
Source: Screenshot of Chrome and Firefox browsers loading youtube.com videos and myactivity.google.com.

72.   Google tracks users by sending "log_event" data from user PCs to www.youtube.com, e.g., an X-Youtube-Identity-Token that starts with "QUFFLUhq" and is different for different users, even though the users are viewing YouTube simultaneously on the same PC, and that is the same for the same user, even when the user views YouTube on different PCs and on different days.
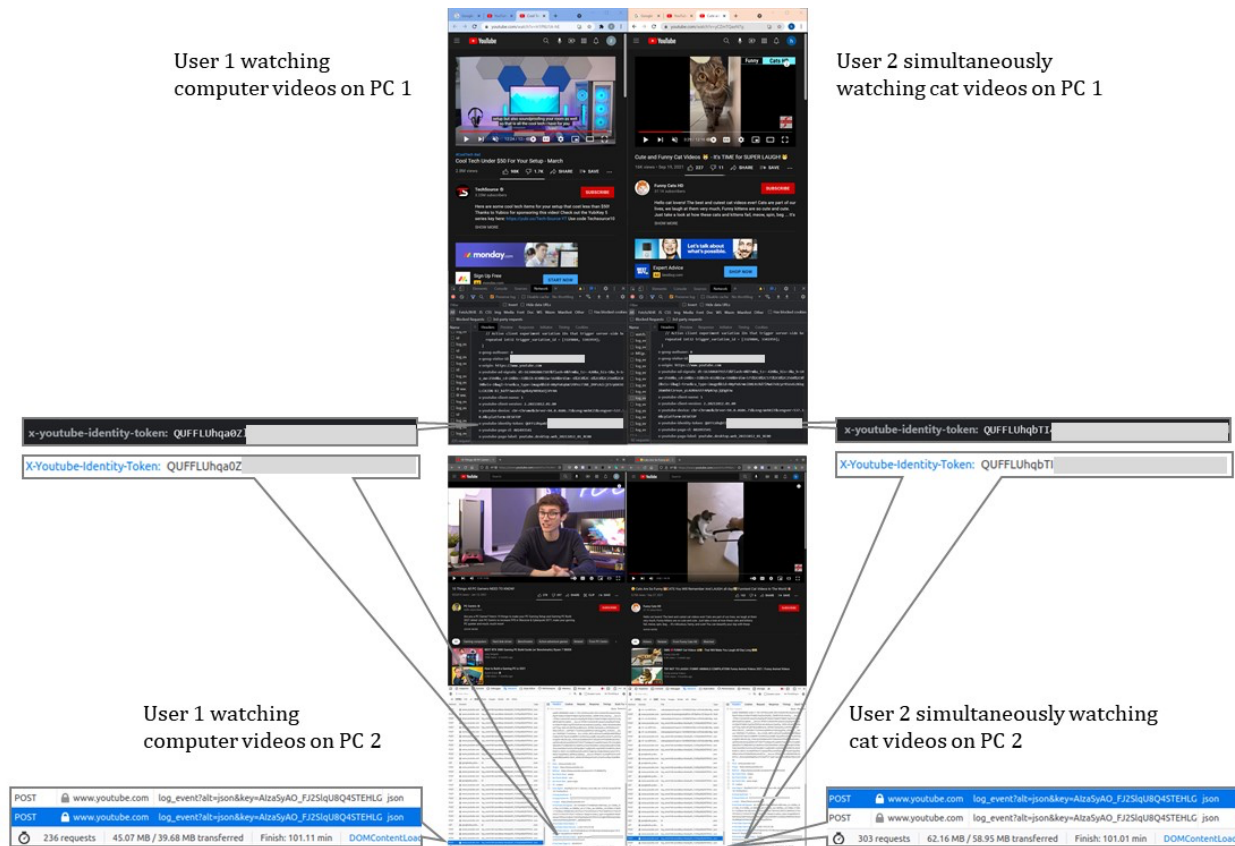
Source: Screenshot of Chrome browsers and Chrome DevTools, and Firefox browsers and Developer Tools loading youtube.com.

73.   Google and YouTube select from among the set of keywords, one keyword in accordance with a selection weighting for each keyword based upon a performance score attributed to the keyword that reflects the performance of advertising messages selected using the keyword, wherein the performance score indicates the extent to which the advertising messages selected using the keyword have generated revenue. For example, Google tracks the performance of keywords and topics in Google and YouTube advertising. Google shares some of that data with its advertising customers, and uses that data for multiple purposes including automated advertisement bidding. The performance of keywords and topics indicates the extent to which advertising messages selected using those keywords or topics have generated revenue

74.   For example, Google "Smart Bidding" tracks advertisement keyword performance including conversions.

The programmatic bidding algorithm is able to learn from how well publishers, keywords, and targeting performs from aggregate conversion data, as well as evaluate all historical performance at the advertiser domain level. As a result of using this pre-existing learning, Google Smart Bidding performs best by opting in new campaigns to ECPC, Maximize Conversions or Target CPA from Day 1. These campaigns typically outperform Manual CPC bidding even during the 2-4 week learning period. During the learning period, the bidding algorithm learns even more about what works for the specific advertiser and campaign to further improve performance.

Source: https://services.google.com/fh/files/misc/gda_smart_bidding_guide.pdf, p. 7.

75.   Google shares some of that keyword conversion performance data with advertisers. Conversion tracking indicates the extent to which advertisements using the keyword have generated revenue for advertisers because, for example, conversions include purchases by customers who viewed the advertisement.

Google Ads Help   Q   Describe your issue

- Conversion tracking is an advanced feature that shows you which keywords most often lead customers to take the actions you want them to take (these actions, such as a purchase or newsletter signup, are called *conversions*). Tracking your conversions can help you decide whether to increase your max CPC for keywords that are performing well, and decrease it for those that are underperforming. Conversion tracking is a requirement for using certain automated bid strategies, including ECPC with Search and Shopping campaigns, Target CPA, and Target ROAS. Learn more About automated bidding.

Source: https://support.google.com/google-ads/answer/2472712

76.   Conversions also indicate the extent to which advertisements have generated revenue for Google because advertisers pay for conversions.

Source: https://support.google.com/google-ads/answer/10276703

77.   As another example, Google "Expansion" selects additional keywords and topics that are tied to additional advertisements if data suggests that the keywords will lead to conversions – which indicates the extent to which advertisements using those keywords have generated revenue.

Source: https://support.google.com/google-ads/answer/190596

78.   As another example, Google selects additional keywords using matching such as the default "broad match" algorithm. Google selects keywords that are related to the keywords that advertisers chose for their ads, and uses those additional keywords to select more advertisements for a Google ad auction. Google has an incentive to selects keywords that will

increase its revenue, and Google does so by tracking the extent to which advertising messages selected using a given keyword has generated revenue for Google. Additionally, Google's "broad match" identifies multiple key words as duplicates, and selects at least one of the keywords, *e.g.*, the one with the higher "Ad Rank" score, which indicates revenue generated by the advertisement.

Source: https://support.google.com/google-ads/answer/7478529

79.	Google runs an ad auction that identifies candidate ads. For every auction, Google attributes, to each advertisement in that auction, an "Ad Rank" score that includes the ad's expected clickthrough rate (CTR). CTR reflects the advertisement's performance including revenue that Google has generated from that advertisement (e.g., revenue from advertisers, who pay in a variety of ways including for impressions, or for clicks), and revenue that the advertiser has generated from the ad (e.g., impressions or clicks that led to sales). Google's ad auction selects zero or more winning advertisements for each auction, typically by selecting ads with the highest Ad Rank score.

The ad auction is how Google decides which ads to show and how they're positioned.

Google Ads calculates Ad Rank for every ad in the auction. Ad Rank determines your ad position and whether your ads are eligible to show at all. Generally speaking, the ad with the highest Ad Rank gets to show in the top position and the ad with the second-highest Ad Rank gets to show in the second position (assuming the ads clear the relevant thresholds), and so on.

Every time someone does a search that triggers an ad that competes in an auction, we calculate an Ad Rank. This calculation incorporates your bid and auction-time measurements of expected CTR, ad relevance, and landing page experience, among other factors. To determine the auction-time quality components, we look at a number of different factors. By improving the following factors you can help improve the quality components of your Ad Rank:

- Your ad's expected clickthrough rate: This is partly based on your ad's historical clicks and impressions (adjusting for factors such as ad position, extensions, and other formats that may have affected the visibility of an ad that someone previously clicked)

Source: https://support.google.com/google-ads/answer/1722122

80.   Google's Ad Rank score includes the ad's expected clickthrough rate, which in turn reflects past clicks and impressions (see previous quote), which are among the ways Google generates revenue from advertisers.

Source: https://support.google.com/google-ads/answer/10276703

81.   Google also uses "broad match" with "Smart Bidding" to select additional keywords and find additional auctions for advertisements using those keywords. Google tracks "how well the query is likely to perform," which indicates the extent to which advertisements using the relevant keywords have generated revenue.

Source: https://support.google.com/google-ads/answer/7065882

82.   Google and YouTube respond to the web page request with a version of the requested web page that includes an instruction to select an advertising message for display within the web page on the basis of the selected keyword. For example, YouTube responds to the user's

request for a YouTube page, such as www.youtube.com, with a version of the page that is customized for the user. The web page includes advertisements that won auctions for the relevant instance of the web page and any YouTube video playing on the web page, and includes a collection of YouTube video recommendations for that particular user.

83.   In the example below, YouTube sent 3 different users 3 different versions of the page www.youtube.com simultaneously on the same computer. User 1 watched computer videos, and the page for user 1 suggests computer videos and shows an ad for a Google phone and cell phone plan. User 2 watched cat videos, and the page for user 2 recommends cat videos and shows an ad for YouTube Ads. Guest user 3 watched a football video, and the page for user 3 shows an ad for YouTubeTV and recommends a football video.
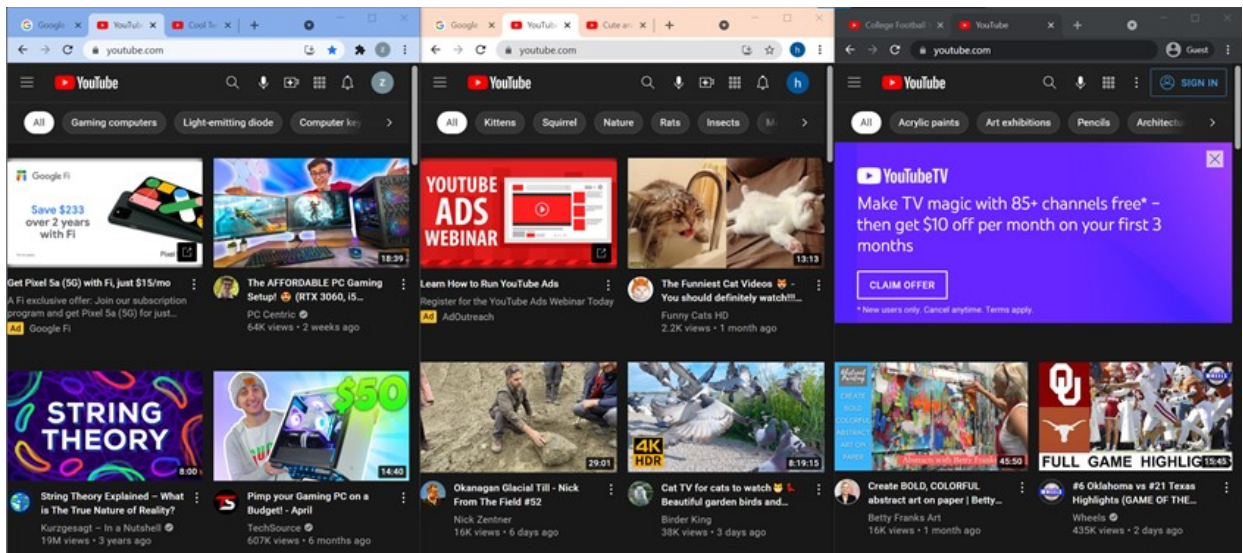
Source: Screenshot of Chrome browsers loading youtube.com.

84.   YouTube initially responds to the request for www.youtube.com with a visually empty html page that has a few lines of JavaScript.
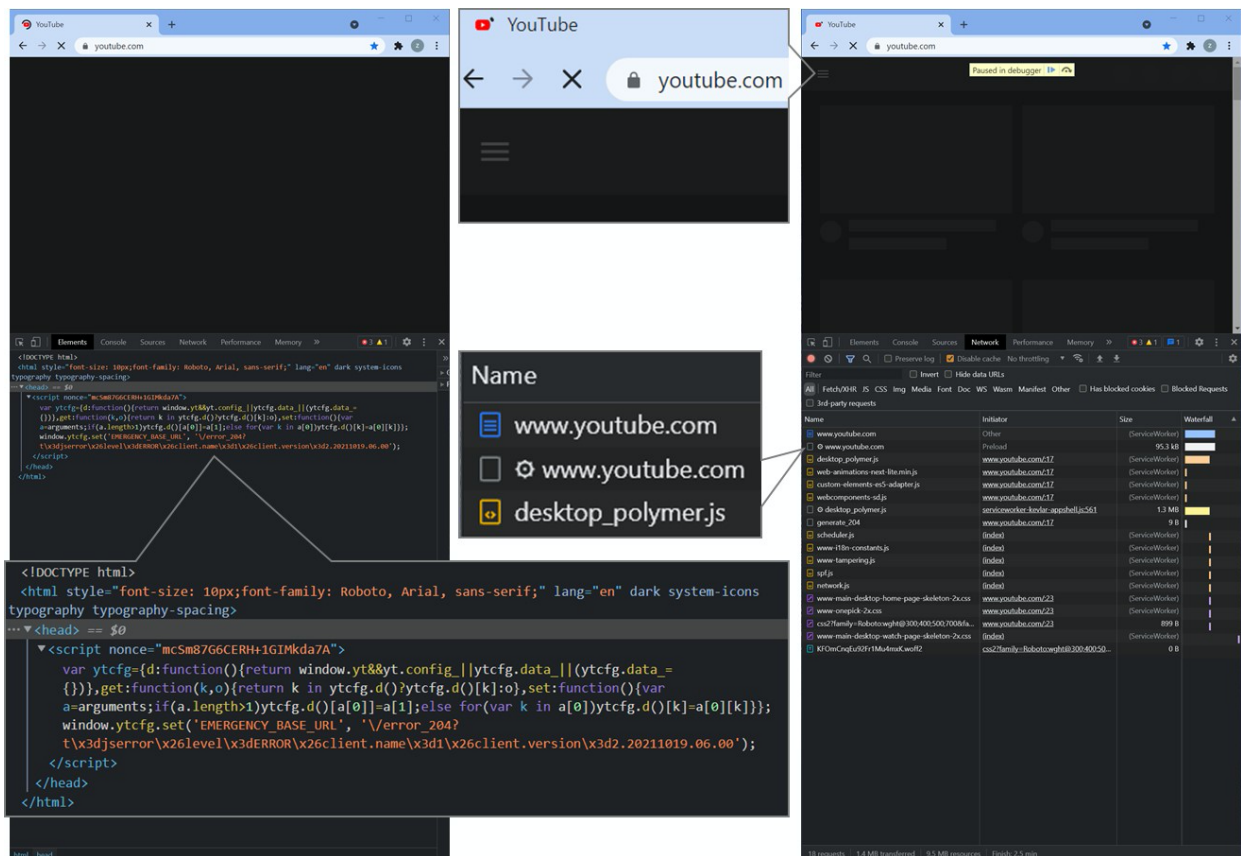
Source: Screenshot of Chrome browser and Chrome DevTools loading youtube.com.

85.   The JavaScript includes instructions to fetch additional JavaScript and data.

Google runs an advertisement auction and the browser displays the winning advertisement(s).

The web page includes an instruction to select an advertisement based on the keyword that Google

selected.
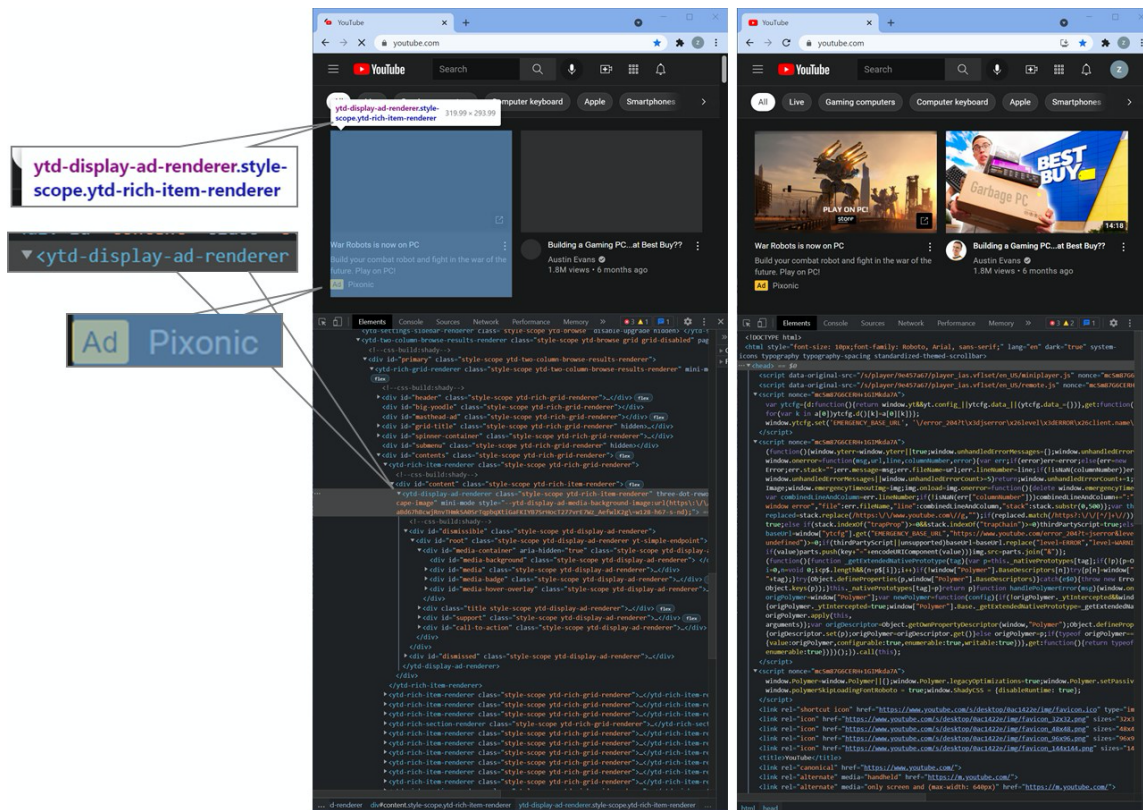
Source: Screenshot of Chrome browser and Chrome DevTools loading youtube.com.

86.   Defendants were made aware of the '298 patent and their infringement thereof at least as early as November 18, 2021 when Revitalization Partners provided notice of Defendants' infringement of the '298 patent to Sundar Pichai of Google and Susan Wojcicki of YouTube. From the date of their receipt of notice, Defendants' infringement of the '298 patent was willful and intentional under the standard announced in *Halo Elecs., Inc. v. Pulse Elecs., Inc.,* 136 S.Ct. 1923, 195 L.Ed 2d 278 (2016). Since at least November 18, 2021 Defendants willfully infringed the '298 patent by refusing to take a license and continuing to make, use, test, sell, license, and/or offer for sale/license the Accused Products. Defendants were aware that they infringed the '676 patent since at least November 18, 2021 and instead of taking a license, opted to make the business decision to "efficiently infringe" the '298 patent. In doing so, Defendants willfully infringed the '298 patent.

87.   Defendants' infringement has damaged and injured and continues to damage and injure Plaintiffs.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs requests that the Court enter judgment for Plaintiffs and against Defendants as follows:

88.   That U.S. Patent No. 7,747,676 be judged valid, enforceable, and infringed by Defendants;

89.   That U.S. Patent No. 7,882,175 be judged valid, enforceable, and infringed by Defendants;

90.   That U.S. Patent No. 8,082,298 be judged valid, enforceable, and infringed by Defendants;

91.   That Plaintiffs be awarded judgment against Defendants for damages together with interests and costs fixed by the Court including an accounting of all infringements and/or damages not presented at trial;

92.   That the Court declare this an exceptional case and award Plaintiffs their attorneys' fees, as provided by 35 U.S.C. § 285 and that Plaintiffs be awarded enhanced damages up to treble damages for willful infringement as provided by 35 U.S.C. § 284; and

93.   That Plaintiffs be awarded such other and further relief as this Court may deem just and proper.

JURY DEMAND

Plaintiffs respectfully request a jury trial on all issues so triable.

Dated: November 19, 2021   /s/ *Deron Dacus*
                                            Deron R Dacus
                                            THE DACUS FIRM, PC
                                            821 ESE Loop 323, Suite 430
                                            Tyler, TX 75701
                                            Tel: 903 705-1117/Fax: 903 581-2543

ddacus@dacusfirm.com

Robert F. Kramer (*pro hac vice* to be filed)
rkramer@feinday.com
M. Elizabeth Day (*pro hac vice* to be filed)
eday@feinday.com
David Alberti (*pro hac vice* to be filed)
dalberti@feinday.com
Sal Lim (*pro hac vice* to be filed)
slim@feinday.com
Russell Tonkovich (*pro hac vice* to be filed)
rtonkovich@feinday.com
Marc Belloli (*pro hac vice* to be filed)
mbelloli@feinday.com
**FEINBERG DAY KRAMER ALBERTI
LIM TONKOVICH & BELLOLI LLP**
577 Airport Boulevard, Suite 250
Burlingame, California 94010
Tele: (650) 825-4300/Fax: (650) 460-8443

Attorneys for Plaintiffs

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing motion was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service on this 19th day of November, 2021.

/s/ *Deron Dacus*